

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	10760	(titanium near (layer or film)) same ((titanium near nitride) near (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:21
L2	3643	(titanium near (layer or film)) same ((titanium near nitride) near (layer or film)) same aluminum	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:21
L3	2502	(titanium near (layer or film)) same ((titanium near nitride) near (layer or film)) same (aluminum near2 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:22
L4	285	((titanium near (layer or film)) same ((titanium near nitride) near (layer or film)) same (aluminum near2 (layer or film)))) .clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:23
L5	61	((((first or second or upper or lower or top or bottom) near (titanium near (layer or film)))) same ((titanium near nitride) near (layer or film)) same (aluminum near2 (layer or film)))) .clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:24
L6	26	((((first or second or upper or lower or top or bottom) near (titanium near (layer or film)))) same (((first or second or upper or lower or top or bottom) near (titanium near nitride) near (layer or film)))) same (aluminum near2 (layer or film)))) .clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:26
L7	0	(display same (((first or second or upper or lower or top or bottom) near (titanium near (layer or film)))) same (((first or second or upper or lower or top or bottom) near (titanium near nitride) near (layer or film)))) same (aluminum near2 (layer or film)))) .clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:26

## EAST Search History

L8	1	(display same (((first or second or upper or lower or top or bottom) near (titanium near (layer or film))) same (((first or second or upper or lower or top or bottom) near (titanium near nitride) near (layer or film))) same (aluminum near2 (layer or film))))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:27
L9	1	((tft or lcd or display) same (((first or second or upper or lower or top or bottom) near (titanium near (layer or film))) same (((first or second or upper or lower or top or bottom) near (titanium near nitride) near (layer or film))) same (aluminum near2 (layer or film))))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:27
L10	1	((tft or lcd or display) same (((first or second or upper or lower or top or bottom) near (titanium near (layer or film))) same (((first or second or upper or lower or top or bottom) near (titanium near nitride) near (layer or film))) same (aluminum near5 (layer or film))))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:28
L11	1	10/766564	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:30
L12	0	l11 and (display same titanium same aluminum same nitride)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:30
L13	1	l11 and (titanium same aluminum same nitride)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:32
L14	1	l11 and ((preventing or prevention or preventive or diffusion or diffusive or barrier) same titanium same aluminum same nitride)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:33
L15	1	l11 and ((preventing or prevention or preventive or diffusion or diffusive or barrier) same titanium same aluminum same nitride) same nitrogen	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:33

## EAST Search History

L16	570	((preventing or prevention or preventive or diffusion or diffusive or barrier) same titanium same aluminum same nitride) same nitrogen	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:34
L17	75	( ((preventing or prevention or preventive or diffusion or diffusive or barrier) same titanium same aluminum same nitride) same nitrogen) and display and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:34
L18	75	((preventing or prevention or preventive or diffusion or diffusive or barrier) same titanium same aluminum same nitride) same nitrogen) and display and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:36
L19	41	((((preventing or prevention or preventive or diffusion or diffusive or barrier) near10 titanium near10 nitride) same titanium same aluminum same nitride) same nitrogen) and display and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:37
L20	38	((((preventing or prevention or preventive or diffusion or diffusive or barrier) near10 titanium near2 nitride) same titanium same aluminum same nitride) same nitrogen) and display and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:38
L21	18	((((preventing or prevention or preventive or diffusion or diffusive or barrier) near5 titanium near2 nitride) same titanium same aluminum same nitride) same nitrogen) and display and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 13:47
L22	51	((((preventing or prevention or preventive or diffusion or diffusive or barrier) near5 titanium near2 nitride) same titanium same aluminum same nitride) same (source or drain or source/drain) same electrode) and display and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:05
L23	3846	(electrode same (titanium near nitride) same titanium same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:05

## EAST Search History

L24	1293	(electrode same (titanium near nitride) same titanium same aluminum) and ((titanium near nitride) same (barrier or preventive or prevention or preventing))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:06
L25	949	(electrode same (titanium near nitride) same titanium same aluminum) and ((titanium near nitride) near10 (barrier or preventive or prevention or preventing))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:07
L26	434	(electrode same (titanium near nitride) same titanium same aluminum) and ((titanium near nitride) near10 (barrier or preventive or prevention or preventing)) and nitrogen	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:07
L27	110	(electrode same (titanium near nitride) same titanium same aluminum) and ((titanium near nitride) near10 (barrier or preventive or prevention or preventing)) and ((titanium near nitride) with nitrogen)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:07
L28	12	(electrode same (titanium near nitride) same titanium same aluminum).clm. and ((titanium near nitride) near10 (barrier or preventive or prevention or preventing)) and ((titanium near nitride) with nitrogen)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:08
L29	12	(electrode same (titanium near nitride) same (titanium near2 (layer or film)) same aluminum).clm. and ((titanium near nitride) near10 (barrier or preventive or prevention or preventing)) and ((titanium near nitride) with nitrogen)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:09
L30	5	(electrode same (titanium near nitride) same (titanium near (layer or film)) same aluminum).clm. and ((titanium near nitride) near10 (barrier or preventive or prevention or preventing)) and ((titanium near nitride) with nitrogen)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:13



## EAST Search History

L31	974	("20010043175" "20010052954" "20020076574" "20020085157" "20020142605" "20030222575" "20040183072" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5278099" "5341026" "5345108" "5485019" "5555112" "5607776" "5742468" "5747879" "5759916" "5804878" "5893752" "0555112" "6028003" "6096572" "6147375" "6147403" "6160272" "6166396" "6180511" "6224942" "6255706" "6271099" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:14
L32	480	I31 and (titanium near nitride)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:14
L33	451	I31 and (titanium near nitride) and aluminum	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:14
L34	340	I31 and ((titanium near nitride) same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:15
L35	124	I31 and (electrode same (titanium near nitride) same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:16
L36	33	I31 and (electrode same ((titanium near nitride) near5 (preventive or barrier or preventing or prevention)) same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:17
L37	417	(electrode same ((titanium near nitride) near5 (preventive or barrier or preventing or prevention)) same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:18

## EAST Search History

L38	5	(electrode same ((titanium near nitride) near5 (preventive or barrier or preventing or prevention)) same aluminum).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:18
L39	5	(electrode same ((titanium near nitride) near5 (preventive or barrier or preventing or prevention)) same aluminum).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:18
L40	417	(electrode same ((titanium near nitride) near5 (preventive or barrier or preventing or prevention)) same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:18
L41	620	(electrode same ((titanium near nitride) near10 (preventive or barrier or preventing or prevention)) same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:20
L42	15	(electrode same ((titanium near nitride) near10 (preventive or barrier or preventing or prevention)) same aluminum).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:18
L43	50	(display or tft) same (electrode same ((titanium near nitride) near10 (preventive or barrier or preventing or prevention)) same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:22
L44	11	(electrode same ((titanium near nitride) near10 (preventive or barrier or preventing or prevention)) same aluminum) and (flat near panel)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:24
L45	8501	(aluminum near2 layer) and ((titanium or ti) near layer)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:25

## EAST Search History

L58	39	I57 and (aluminum near2 layer) and ((titanium or ti) near layer)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:27
L59	4	Ti/TiN/Al/TiN/Ti	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:28

## EAST Search History

L72	0	I71 and (five near layer near (stack or stacked or laminate or laminated or lamination))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:31
L73	2	I71 and (five near layer with (stack or stacked or laminate or laminated or lamination))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:32
L74	2215	(five near layer with (stack or stacked or laminate or laminated or lamination))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:32
L75	112	electrode with (five near layer with (stack or stacked or laminate or laminated or lamination))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:33
L76	31	electrode with (five near layer with (stack or stacked or laminate or laminated or lamination)) and (tft or display)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:34
L77	114	("20010002050" "20010035528" "20010043175" "20020076574" "20020085157" "20020142605" "20020164860" "20030222575" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5244820" "5278099" "5341026" "5345108" "5485019" "5538921" "5555112" "5607776" "5742468" "5747879" "5759916" "5893752" "6028003" "6083830" "6096572" "6147375" "6147403" "6166396" "6180511" "6224942" "6255706" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:35



## EAST Search History

L82	115	("20010002050" "20010035528" "20010043175" "20020076574" "20020085157" "20020142605" "20020164860" "20030222575" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5244820" "5278099" "5341026" "5345108" "5485019" "5538921" "5555112" "5607776" "5742468" "5747879" "5759916" "5893752" "6028003" "6083830" "6096572" "6147375" "6147403" "6166396" "6180511" "6224942" "6255706" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502") and (electrode same (titanium near nitride) same aluminum)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:37
L83	25	("4676867" "4775550" "4885262" "4983546" "5003062" "5084412" "5087589" "5106787" "5186745" "5192697" "5270259" "5341026" "5352630" "5429990" "5479054" "5496776" "5514910" "5549786" "5569618" "5607880" "5702568" "5753975" "5817582" "5855962" "5866476").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2007/07/20 14:42
L84	52276	((ti or titanium) near (film or layer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:42
L85	28650	((ti or titanium) adj (film or layer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:42
L86	9271	((ti or titanium) adj (film or layer)) and ((tin or (titanium adj nitride)) adj (film or layer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:43

## EAST Search History

L87	1655	electrode with ((ti or titanium) adj (film or layer)) and ((tin or (titanium adj nitride)) adj (film or layer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:43
L88	663	electrode with ((ti or titanium) adj (film or layer)) with ((tin or (titanium adj nitride)) adj (film or layer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:43
L89	31	((source or drain or source/drain) near electrode) with ((ti or titanium) adj (film or layer)) with ((tin or (titanium adj nitride)) adj (film or layer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:45
L90	9	((source or drain or source/drain) near electrode) with ((ti or titanium) adj (film or layer)) with ((tin or (titanium adj nitride)) adj (film or layer)) with ((al or aluminum) adj (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:46
L91	70	((source or drain or source/drain) near electrode) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) with ((al or aluminum) near2 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:47
L92	75	((source or drain or source/drain) near electrode) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near2 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:48
L93	646	(electrode) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near2 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:48
L94	107	(electrode) same (stack or multilayer or multi-laye or stacking or stacked) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near2 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:49

## EAST Search History

L95	118	(electrode) same (stack or multilayer or multi-layer or stacking or stacked) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near2 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:52
L96	126	(electrode) same (stack or multilayer or multi-layer or stacking or stacked) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:52
L97	4	((electrode) same (stack or multilayer or multi-layer or stacking or stacked) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near5 (layer or film))). clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:53
L98	126	((electrode) same (stack or multilayer or multi-layer or stacking or stacked) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near5 (layer or film)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:54
L99	90	((electrode) same (stack or multilayer or multi-layer or stacking or stacked) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near5 (layer or film))) and (((tin or (titanium near nitride)) near10 barrier or preventive or preventing or prevention))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:55

## EAST Search History

L100	24	((electrode) same (stack or multilayer or multi-layer or stacking or stacked) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near5 (layer or film))) and (((tin or (titanium near nitride)) near10 barrier or preventive or preventing or prevention)) and (nitrogen near10 (content or concentration or contain or ratio or percentage or percent))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:56
L101	15	((electrode) same (stack or multilayer or multi-layer or stacking or stacked) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (film or layer)) same ((al or aluminum) near5 (layer or film))) and (((tin or (titanium near nitride)) near10 barrier or preventive or preventing or prevention)) and (nitrogen near10 (content or concentration or contain or ratio or percentage or percent)) and (aluminum near10 (content or concentration or contain or ratio or percentage or percent))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:57



# EAST Search History

L102	1014	("20010002050" "20010035528" "20010043175" "20020076574" "20020085157" "20020142605" "20020164860" "20030222575" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5244820" "5278099" "5341026" "5345108" "5485019" "5538921" "5555112" "5607776" "5742468" "5747879" "5759916" "5893752" "6028003" "6083830" "6096572" "6147375" "6147403" "6166396" "6180511" "6224942" "6255706" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502") or ("20010002050" "20010020702" "20010043175" "20020076574" "20020085157" "20020142605" "20020164860" "20030222575" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5278099" "5341026" "5345108" "5485019" "5538921" "5555112" "5607776" "5742468" "5747879" "5759916" "5893752" "6028003" "6083830" "6096572" "6147375" "6147403" "6166396" "6180511" "6224942" "6255706" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502") or ("20010043175" "20010052954" "20020076574" "20020085157" "20020142605" "20030222575" "20040183072" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5278099" "5341026" "5345108" "5485019" "5555112" "5607776" "5742468" "5747879" "5759916" "5804878" "5893752" "0555112" "6028003" "6096572" "6147375" "6147403" "6160272" "6166396" "6180511" "6224942" "6255706" "6271099" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 14:59
7/20/07 4:21:12 PM	C:\Documents and Settings\Fredm\My Documents\EAST\Workspaces\10766564_case.wsp					Page 17

## EAST Search History

L104	321	I103 and ((titanium near nitride) or tin).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:01
L105	104	I103 and ((titanium near nitride) or tin).clm. and electrode.clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:00
L106	50	I103 and ((titanium near nitride) or tin).clm. same electrode.clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:00
L107	429	I103 and (multilayer or multi-layer or stack)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:10
L108	76	I107 and (aluminum near5 (ratio or content o contain or concentration or percentage or percent))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:10
L109	111	I107 and ((al or aluminum) near5 (ratio or content o contain or concentration or percentage or percent))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:10
L110	40	I107 and ((al or aluminum) near5 (ratio or content o contain or concentration or percentage or percent)) and ((nitrogen) near5 (ratio or content o contain or concentration or percentage or percent))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:11
L111	34	I107 and ((al or aluminum) near5 (ratio or content or contain or concentration or percentage or percent)) and ((nitrogen) near5 (ratio or content or contain or concentration or percentage or percent))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:15

# EAST Search History

L124	236	(US-20050072973-\$ or US-20040023449-\$ or US-20040183072-\$ or US-20040012023-\$ or US-20020056864-\$ or US-20050092937-\$ or US-20010036755-\$ or US-20040092061-\$ or US-20030124755-\$ or US-20040094787-\$ or US-20060011914-\$ or US-20060097258-\$ or US-20060113597-\$ or US-20030090002-\$ or US-20050146262-\$ or US-20030111664-\$ or US-20030180996-\$ or US-20030116805-\$ or US-20040027505-\$ or US-20040164296-\$ or US-20010050364-\$ or US-20010026835-\$ or US-20050285109-\$ or US-20020056837-\$ or US-20020066901-\$ or US-20040056251-\$).did. or (US-20040135180-\$ or US-20020013011-\$ or US-20040051102-\$ or US-20050263835-\$ or US-20020117717-\$ or US-20040157382-\$ or US-20050233557-\$ or US-20050099369-\$ or US-20030047808-\$ or US-20010009283-\$ or US-20020146874-\$ or US-20010010702-\$ or US-20040053451-\$ or US-20040135143-\$ or US-20040023445-\$ or US-20040009307-\$ or US-20040051180-\$ or US-20040056296-\$ or US-20020179969-\$ or US-20040101977-\$ or US-20040145005-\$ or US-20040125254-\$ or US-20030169380-\$ or US-20040007748-\$ or US-20020119606-\$ or US-20050162602-\$ or US-20040192004-\$).did. or (US-20030160333-\$ or US-20050014363-\$ or US-20020158288-\$ or US-20050199878-\$ or US-20050045900-\$ or	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/07/20 15:14
7/20/07 4:21:12 PM	C:\Documents and Settings\Fred\My Documents\10766564_case.wsp	US-20050014363-\$ or US-20020158288-\$ or US-20050199878-\$ or US-20050045900-\$ or				Page 20

## EAST Search History

L125	22	l124 and ((al or aluminum) near5 (ratio or content or contain or concentration or percentage or percent)) and ((nitrogen) near5 (ratio or content or contain or concentration or percentage or percent))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:15
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## EAST Search History

L126	1017	("20010002050" "20010035528" "20010043175" "20020076574" "20020085157" "20020142605" "20020164860" "20030222575" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5244820" "5278099" "5341026" "5345108" "5485019" "5538921" "5555112" "5607776" "5742468" "5747879" "5759916" "5893752" "6028003" "6083830" "6096572" "6147375" "6147403" "6166396" "6180511" "6224942" "6255706" "6271099" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502") or ("20010002050" "20010020702" "20010043175" "20020076574" "20020085157" "20020142605" "20020164860" "20030222575" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5278099" "5341026" "5345108" "5485019" "5538921" "5555112" "5607776" "5742468" "5747879" "5759916" "5893752" "6028003" "6083830" "6096572" "6147375" "6147403" "6166396" "6180511" "6224942" "6255706" "6271099" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502") or ("20010043175" "20010052954" "20020076574" "20020085157" "20020142605" "20030222575" "20040183072" "4153529" "4511756" "4646424" "4778258" "4782380" "4910580" "4933296" "4976839" "5243202" "5278099" "5341026" "5345108" "5485019" "5555112" "5607776" "5742468" "5747879" "5759916" "5804878" "5893752" "5555112" "6028003" "6096572" "6147375" "6147403" "6160272" "6166396" "6180511" "6224942" "6255706" "6271099" "6271543" "6285123" "6309965" "6348735" "6365927" "6380625" "6410986" "6414738" "6440752" "6448612" "6518630" "6534393" "6608353" "6642093" "6650017" "6674502")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:20
7/20/07 4:21:12 PM	C:\Documents and Settings\Fredm\My Documents\EAST\Workspaces\10766564_case.wsp					Page 22

## EAST Search History

L127	478	I126 and (titanium adj nitride)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:24
L128	247	I126 and (titanium adj nitride) and (titanium same aluminum same (prevent or preventing or prevented or prevention or barrier))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:25
L129	215	I126 and (titanium adj nitride) and (titanium with aluminum same (prevent or preventing or prevented or prevention or barrier))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:25
L130	170	I126 and (titanium adj nitride) and (titanium with aluminum with (prevent or preventing or prevented or prevention or barrier))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:26
L131	18	I126 and (titanium adj nitride) and (titanium with aluminum with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:27
L132	2	I126 and (titanium adj nitride) and (titanium with (aluminum near2 alloy) with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:28
L133	1	I126 and (titanium adj nitride) with (titanium with (aluminum near2 alloy) with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:28
L134	1	I126 and (titanium adj nitride) with (titanium with (aluminum near5 alloy) with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:28
L135	6	I126 and (titanium adj nitride) with (titanium with (aluminum) with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:29

## EAST Search History

L136	6	l126 and (titanium adj nitride) with (titanium with (aluminum or aluminum-based) with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:30
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## EAST Search History

L149	236	(US-20050072973-\$ or US-20040023449-\$ or US-20040183072-\$ or US-20040012023-\$ or US-20020056864-\$ or US-20050092937-\$ or US-20010036755-\$ or US-20040092061-\$ or US-20030124755-\$ or US-20040094787-\$ or US-20060011914-\$ or US-20060097258-\$ or US-20060113597-\$ or US-20030090002-\$ or US-20050146262-\$ or US-20030111664-\$ or US-20030180996-\$ or US-20030116805-\$ or US-20040027505-\$ or US-20040164296-\$ or US-20010050364-\$ or US-20010026835-\$ or US-20050285109-\$ or US-20020056837-\$ or US-20020066901-\$ or US-20040056251-\$).did. or (US-20040135180-\$ or US-20020013011-\$ or US-20040051102-\$ or US-20050263835-\$ or US-20020117717-\$ or US-20040157382-\$ or US-20050233557-\$ or US-20050099369-\$ or US-20030047808-\$ or US-20010009283-\$ or US-20020146874-\$ or US-20010010702-\$ or US-20040053451-\$ or US-20040135143-\$ or US-20040023445-\$ or US-20040009307-\$ or US-20040051180-\$ or US-20040056296-\$ or US-20020179969-\$ or US-20040101977-\$ or US-20040145005-\$ or US-20040125254-\$ or US-20030169380-\$ or US-20040007748-\$ or US-20020119606-\$ or US-20050162602-\$ or US-20040192004-\$).did. or (US-20030160333-\$ or US-20050014363-\$ or US-20020158288-\$ or US-20050199878-\$ or US-20050045900-\$ or	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/07/20 15:29
7/20/07 4:21:12 PM	C:\Documents and Settings\PERCEN\My Documents\EAST\workspaces\10766564_case.wsp					Page 25



## EAST Search History

L150	40	l149and (titanium adj nitride) with (titanium with (aluminum or aluminum-based) with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:31
L151	0	l149 and (titanium adj nitride) with (titanium with (aluminum or aluminum-based) with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:31
L152	0	l149 and (titanium adj nitride) same (titanium same (aluminum or aluminum-based) with (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:31
L153	2	l149 and (titanium adj nitride) same (titanium same (aluminum or aluminum-based) same (prevent or preventing or prevented or prevention or barrier) with (react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:31
L154	11	l149 and (titanium adj nitride) same (titanium same (aluminum or aluminum-based) same (reaction or react or reacting))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:33
L155	96	Ti/TiN/Al	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:34
L156	16982	(titanium adj (film or layer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:35
L157	28650	((ti or titanium) adj (film or layer))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:35
L158	9271	((ti or titanium) adj (film or layer)) and ((tin or (titanium adj nitride)) adj (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:35

## EAST Search History

L159	5869	((ti or titanium) adj (film or layer)) and ((tin or (titanium adj nitride)) adj (layer or film)) and ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:36
L160	4467	((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (layer or film)) and ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:36
L161	2797	((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (layer or film)) same ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:36
L162	684	electrode same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (layer or film)) same ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:37
L163	262	electrode same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (layer or film)) same ((al or aluminum) near5 (layer or film)) and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:42
L164	4	electrode same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (layer or film)) same ((al or aluminum) near5 (layer or film)).clm. and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:43
L165	1	((multilevel or multi-level or multilayer or multi-layer or stack) near2 electrode) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (layer or film)) same ((al or aluminum) near5 (layer or film)). clm. and pixel	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:44
L166	5	((multilevel or multi-level or multilayer or multi-layer or stack) near2 electrode) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (layer or film)) same ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:45

## EAST Search History

L167	684	(electrode) same ((ti or titanium) adj (film or layer)) same ((tin or (titanium adj nitride)) adj (layer or film)) same ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:46
L168	570	(electrode) same ((ti or titanium) adj (film or layer)) near10 ((tin or (titanium adj nitride)) adj (layer or film)) same ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:46
L169	419	(electrode) same ((ti or titanium) adj (film or layer)) near10 ((tin or (titanium adj nitride)) adj (layer or film)) near10 ((al or aluminum) near5 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:46
L170	391	(electrode) same ((ti or titanium) adj (film or layer)) near10 ((tin or (titanium adj nitride)) adj (layer or film)) near10 ((al or aluminum) near2 (layer or film))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:46
L171	16	(electrode) same ((ti or titanium) adj (film or layer)) near10 ((tin or (titanium adj nitride)) adj (layer or film)) near10 ((al or aluminum) near2 (layer or film)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:47
L172	3	"2001035528"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:51
L173	2	"20010035528"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:52
L174	24	"5244820"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:53
L175	28	"5278099"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:55
L176	35	"6271543"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:57

## EAST Search History

L177	13937	(five near (layer)) or (5-layer)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:57
L178	13199	(five near (layer)) or (5-layer) with (titanium adj nitride)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:58
L179	13199	(five near (layer)) or (5-layer) with (titanium adj nitride) with aluminum	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 15:58
L180	10	((five near (layer)) or (5-layer)) with (titanium adj nitride) with aluminum	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:02
L181	12	((five near (layer)) or (5-layer)) same (titanium adj nitride) with aluminum	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:02
L182	15	((five near (layer)) or (5-layer)) same (titanium adj nitride) same aluminum	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:05
L183	96	Ti/TiN/Al	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:05
L184	26	("20020180371" "20030089991" "20030214042" "6395411" "6690110" "6911960" "6911960")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:09
L185	9064	257/59.ccls. or 257/72.ccls. or 257/350.ccls. or 257/412.ccls. or 349/43.ccls. or 349/147.ccls. or 349/42.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:14
L186	37	(257/59.ccls. or 257/72.ccls. or 257/350.ccls. or 257/412.ccls. or 349/43.ccls. or 349/147.ccls. or 349/42.ccls.) and (electrode same (titanium adj nitride)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:16



## EAST Search History

L187	97	(257/59.ccls. or 257/72.ccls. or 257/350.ccls. or 257/412.ccls. or 349/43.ccls. or 349/147.ccls. or 349/42.ccls.) and (electrode and (titanium adj nitride)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:16
L188	79	(257/59.ccls. or 257/72.ccls. or 257/350.ccls. or 257/412.ccls. or 349/43.ccls. or 349/147.ccls. or 349/42.ccls.) and (electrode and (titanium adj nitride)).clm. and 257/E\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:17